

Rubigan *Poa annua* Control Programs

Program	Number of Applications	Rate of Application	Spray Interval	Application Timing	Expected % Control
A	2	--A.S.-- 6.0 fl. oz./1000 square feet	14 days	1st application prior to <u><i>Poa annua</i></u> germination	75-95+
		--50W-- 1.5 oz./1000 square feet	14 days	1st application prior to <u><i>Poa annua</i></u> germination	75-95+
B	3	--A.S.-- 4.0 fl. oz./1000 square feet	14 days	1st application prior to <u><i>Poa annua</i></u> germination	75-95+
		--50W-- 1.0 oz./1000 square feet	14 days	1st application prior to <u><i>Poa annua</i></u> germination	75-95+

Note: A single application of 0.5 ounces of Rubigan 50W or 2.0 fluid ounces of Rubigan A.S. per 1000 square feet in January or February following overseeding will help enhance the suppression of *Poa annua* and prolong this effect through the spring season.

Anticipated Results

Application of Rubigan for management of *Poa annua* will coincide with the onset of winter dormancy in Bermudagrass. Extended periods of low temperatures and heavy rainfall after a Rubigan application may result in yellowing of Bermudagrass. This effect is attributable to developing dormancy of Bermudagrass, not to Rubigan application. Normal germination and growth of the overseeded grasses can be expected.

Applications of Rubigan in the programs recommended in this label will result in *Poa annua* control in the range of 75 to 95 percent. Results are most apparent during the following spring season when *Poa annua* seedheads are visible and plant populations can be measured. Concurrent control of turf diseases susceptible to Rubigan at the rates applied can be expected as a part of the *Poa annua* control program.

Precaution

- A single application of Rubigan A.S. or Rubigan E.C. in excess of 8.0 fluid ounces per 1000 square feet or Rubigan 50W in excess of 0.125 pounds per 1000 square feet may inhibit the germination of creeping bentgrass for up to 30 days after application. Do not apply this treatment where creeping bentgrass is to be seeded within 30 days after application.
- During periods of environmental stress, a single high rate application of Rubigan may rapidly eliminate *Poa annua* from greens, tees or other close cut turf areas. Do not apply this treatment if rapid elimination of *Poa annua* is a potential problem.
- Refer the Rubigan label for additional use directions, precautions and limitations before use.

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DowElanco
Indianapolis, IN 46268-3030, U.S.A

09/05/90

Revisions: 1) DowElanco registration numbers added; 2) Label text edited for clarity; Single application program deleted..

Replaces ES 8277, 1/90

S.N.-20

GREENHOUSE DISINFECTANT FOR ORCHIDS

FOR ORNAMENTAL HORTICULTURE

ALGICIDE FOR FOUNTAINS, WATER DISPLAYS,
DECORATIVE POOLS/PONDS AND STANDING WATER

SEP 28 1990
53642-2

Stable--Mixes Readily with Water
Does Not Separate--A Good Wetting Agent
Leaves no Residual Marks on Foliage.

SN.-20 is a Concentrate and
Must be Diluted Before Using

Active Ingredients:	
n-Alkyl(60%C ₁₄ , 30%C ₁₆ , 5%C ₁₂ , 5%C ₁₈) dimethyl benzyl ammonium chloride	10%
n-Alkyl(68%C ₁₂ , 32%C ₁₄) dimethyl ethylbenzyl ammonium chloride	10%
Inert Ingredients:	80%
Total	100%

EPA Reg. No. 53642-2

EPA Est. No. 53642-CA-1

KEEP OUT OF REACH OF CHILDREN

(12 pt)

DANGER

(18 pt)

See Side Panel for Additional Precautionary Statements

Net 1 gal.

R.D. & Associates
P.O. Box 1816 • Pomona, CA 91769

Left Panel

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC
ANIMALS**

DANGER

Corrosive. Harmful or fatal if swallowed. Causes severe eye and skin damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Avoid contamination of food. Remove and wash contaminated clothing.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink egg white, gelatin solution or, if these are not available, drink large quantities of water. Call a physician.

IF ON SKIN: Flush skin with plenty of water for at least 15 minutes.

IF IN EYES: Flush eye with plenty of water for 15 minutes and call a physician.

IF ON CLOTHING: Remove and wash all contaminated clothing before reuse.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is Prohibited. Do Not Reuse Empty Container.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

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(For Orchids (

Use Against Fungal, Bacterial, Algal and Viral ~~plant pathogens~~ and Their Odors

Seedlings: From flask, soak seedlings 2-5 minutes before potting to remove agar. Helps prevent damping-off which may be caused by Pythium debaryanum, Fusarium sp. or Rhizopus negricans. To help control these organisms spray seedling once per month as preventative maintenance. Spray anytime disease is evident.

Use 1½ tsp. SN-20 per gallon of water

Adult Plants: Spray anytime other than rot (see below) is evident with a solution of 2 tsp. SN-20 per gallon of water. Spray once per month as preventative maintenance. Drench compost when fungus is evident.

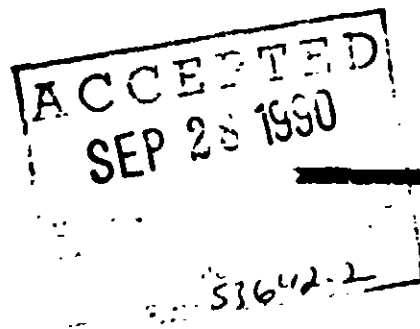
Dividing Plants: Remove compost, then soak plant for 2-5 minutes in 1 Tbsp. SN-20 solution per gallon water. Operate with wet hands and cutting tools (see above). After division and root trim soak divisions in 1 Tbsp. SN-20 solution per 1 gallon water for 2-5 minutes. Pot in compost drenched with SN-20 solution.

Botrytis Petal Blight: During cool weather spray plants, flowers and under benches at first sign of spotting on flowers. Normally weekly spray will greatly reduce or eliminate the botrytis spotting. Use 1 tsp. SN-20 per 3 gallons of water.

Cut Flowers: Containers, tubes and decorative vases. Recommend flower spikes be hardened in 1 tsp. SN-20 per gallon of water solution during harvesting, storage and shipping to help control transfer of such diseases as Botrytis Petal Blight, Erwinia and Phalaenopsis.

Rots (Such as Erwinia et al.): Remove compost from plant, then soak entire plant 10 minutes or more in 1 tbsp. SN-20 per gallon of water. Cut away all rot with treated tool. Soak plant wounds again for 10 minutes in SN-20 solution. Repot in SN-20 drenched compost.

Crown Rot (Phalsenopsis): Spray plants weekly to assure solution getting around and in base of leaves with 2 tsp. SN-20 per gallon of water.



ALGAE KILLER FOR FOUNTAINS, WATER DISPLAYS, DECORATIVE POOLS/PONDS AND STANDING WATER

(In such places as puddles, golf courses, recreational parks, amusement parks, universities and cemeteries.)

For Use Against Algal and Their Odors

This product is effective against ALGAE. *It* is a clear liquid that mixes readily in water and will not separate. With a little experience, you will quickly recognize algae contamination **as it starts**. Algae should be killed immediately. **REMEMBER**-algae can double or quadruple in growth every day.

TREATMENT

1. Remove floating type algae by raking; dragging with cable or chain; skimming - or any other suitable method. It is more economical to remove floating type algae (if possible) before the water is treated.

2. Treat water by "dribbling" *5/20* solution (1 part *5/20* added to 4 parts water) around the edges where algae first grows. *4*

The *use* solution need be applied only where visible algae growth is evident.

This *use* solution is often "dribbled" liberally along the windward side to float across the water - also along the leeward side where contamination gathers.

Where a spray rig is available - it may be used to apply the *use* solution - instead of the hand "dribbling" method.

Algae is generally dead when it does not feel slick to the touch, and the color has changed. However, algae does not always change color when killed.

NOTE: Algae does not usually grow in water that is 5 feet or more in depth. However, floating type algae may grow on pond weeds that grow on the surface of the water.

ALGAE and ODORS in TURF

Spray with a solution of *3* quarts *5/20* in 100 gallons of water, (for smaller quantities, use: *1/2* oz. *5/20* to 2 gallons water). Spray at the rate of approximately 4 gallons solution per 1,000 square feet.

Note: Do not use *when* fish *present*. *It* may cause fish to suffocate and die.

APPLICATIONS

INITIAL DOSAGE:

- / 1/2 tsps of ALGAE-GONE per 52 gallons of water (5 ppm).
- / 1 ounce of ALGAE-GONE per 312 gallons of water (5 ppm)
- / 1 pint of ALGAE-GONE per 5,000 gallons of water (5 ppm).
- / 1 quart of ALGAE-GONE per 10,000 gallons of water (5 ppm).

WEEKLY MAINTENANCE:

You will observe that *this product* created a few extra bubbles. Each week add not more than one-half (1/2) the initial dosage. Or, add slowly until the permissible bubble level is obtained. Apply by hand or automatic proportioner.

NOTE: When pool is to remain empty for several weeks or longer, spray all exposed surfaces with solution (1/2 oz. per 2 gallons of water). This will ~~prevent~~ growth of algae. *Control*

*ppm—Parts per Million Active Ingredients *the*

INITIAL TREATMENT: Fountain operating, put a few drop at a time in water, until slight patches of foam appear.

Overdose reduces lighting efficiency.

EACH WEEK: Add drops until slight foam reappears.

EACH MONTH: Drain and clean bowl. Refill with fresh water, and repeat initial treatment. Draining removes airborne dirt, dust, contamination, and alkali build-up.

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(Directions for Use)

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

FOR ORNAMENTAL HORTICULTURE

SN-20 is a general disinfectant for use on floral ornaments. It will help to control fungal, bacterial and viral pathogens, bacterial and fungal leaf rots, slime forming fungi, odor-causing bacteria and algae. *plant*

SN-20 has been designed specifically for greenhouse and home use where cross contamination may occur between plants. Pre-clean all surfaces prior to application of disinfectant solution. All inanimate surfaces must be thoroughly wetted and remain wet for 10 minutes for disinfection. Fresh solution should be prepared daily and when use solution becomes visibly dirty.

Work Area and Benches:

Spray or swab working surfaces before each work period. Again after each plant is completed, to help control transfer of such diseases as root rot, crown rot, botrytis, downy mildew, etc. USE: 1 Tbsp SN-20 concentrate to 1 gallon water.

Pots, Flats and Flower Buckets

Used pots and flats should be brushed or washed, then soak in SN-20 solution for 10 minutes before using to help control transfer of such diseases as root and crown rots, anthracnose, mildew, rusts and blight. USE: 1 Tbsp. SN-20 per gallon water.

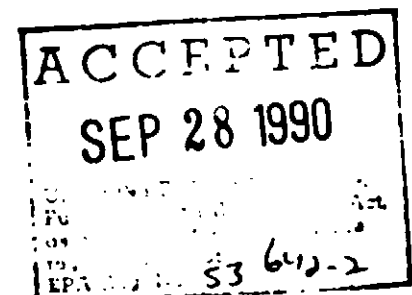
Disinfecting Cutting Tools

Soak cutting edge of tool for 10 minutes in SN-20 solution before use to help control transfer of such diseases as stem and root rots, Tobacco Mosaic Virus (TMV) and botrytis. Use wet tool on plants. At end of work, dry and oil tools. USE: 1 tsp. SN-20 concentrate per quart of water.

ALGAE - Greenhouse Glass

Spray or swab surfaces with SN-20. Allow to air dry. Wash off dead algae with water. Spray clean surfaces again with SN-20 solution. USE: 1 tsp. SN-20 concentrate per gallon water.

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ALGAE - Walkways

For heavy infestation, spray or swab. Let stand for an hour or more. Brush and wash away dead algae. Soak area again with SN-20 solution. Do not rinse. This product will inhibit the growth of algae on walkways. Allow to dry on surface and repeat application when algae growth returns. USE: 1 Tbsp. SN-20 concentrate to 1 gallon water.

ALGAE Control for "Bird Baths" DO NOT USE WITH FISH

Clean to remove algae growth prior to filling bird bath by spraying all exposed surfaces with SN-20 solution. Allow to air dry, brush off dead algae. USE: 1 oz. SN-20 concentrate to 2 gallons of water for cleaning.

MILDEWSTAT - Table Tops, Floors

To control mold and mildew on pre-cleaned hard, non-porous surfaces, (such as floors, walls, tabletops). Apply solution with a cloth, mop, or sponge making sure to wet all surfaces completely. Let air dry. Prepare a fresh solution for each use. Repeat application at weekly intervals or when mildew growth reappears. USE: 1 1/2 ounces of SN-20 concentrate to 1 gallon of water.

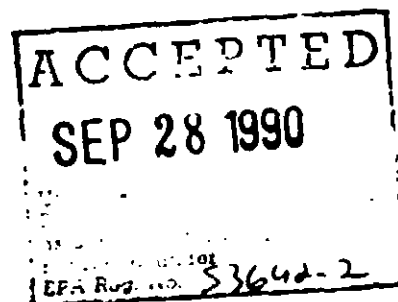
Overhead Watering Systems

During last 2-3 minutes of watering use SN-20 solution as a control program. Due to variations of growing conditions, use SN-20 solution every second to fourth watering. Will control algae in nozzles. USE: 1 oz. SN-20 concentrate to 20 gallons water.

Evaporative Coolers - ALGAE, FUNGUS, ODORS

Controls algae, slime forming fungi on cooler pads and certain fungal plant pathogens that may carry over in the cooler, as well as bacterial odors. USE: 1 tsp. SN-20 per 15 gal. water every other week.

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Seedlings - DAMPING OFF

To reduce damping off problems: Treat seeds and cuttings before planting with SN-20 solution. Use an inert material for planting seeds and cuttings, such as, sphagnum moss, vermiculite, perlite, pumice, sterilized commercial mix rather than garden soil. If garden soil must be used, drench with SN-20 solution.

After planting, water with SN-20 solution (unless you are using garden soil and have already drenched potting soil with SN-20 solution) and again after seedlings emerge. Spray, mist, or fog weekly as needed.

An SN-20 solution is effective in stopping the spread of damping off when sprayed on seedlings. USE: 1 oz. SN-20 concentrate to 4 gallons of water, or 1 tsp. SN-20 concentrate per gallon water.

Seedlings - DOWNY MILDEW

Most common on seedlings. The fungus sporulates on the lower surface of leaves as a white, sparse downy growth. The disease can cause the death of aerial plant parts. Spray with SN-20 solution at 5 day intervals until under control. USE: 1 ounce of SN-20 concentrate to 4 gallons of water.

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Plant Cuttings

Begonia, Fuchsia, Geranium, Chrysanthemum, for controlling powdery mildew, crown gall, gray mold leaf spots. Soak cuttings 2-5 minutes in SN-20 solution. USE: 1 tsp. SN-20 concentrate per gallon water.

Plant in compost drenched in SN-20 solution. USE: 1 tsp SN-20 concentrate per gallon water.

Narcissus, Gladiolus, Iris, Easter Lilies, Tulips, Daffodil, Hyacinth - BULBS

Prestorage and Preplanting Treatments:

Treat the corms immediately after they are "cleaned" and treat again immediately before planting, by soaking them 10 minutes in a SN-20 solution to control fusarium basal rot. Air dry. USE: 1 tsp. SN-20 concentrate to 1 gallon water.

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Iris - LEAF SPOTS

Circular spots, yellowish, then light brown with red border. Spray weekly while leaves are growing.

Iris - BOTRYTIS CROWN ROT OF IRIS; GRAY MOLD ROT, ON RHIZOMATOUS IRIS

Treat all new rhizomes before planting with SN -20 solution. Submerge rhizomes and 3 to 4 inches of leaves for 30 minutes, plant at once (while still wet with SN -20 solution) USE: 1 oz. of SN -20 concentrate to 4 gallons of water.

Roses - MILDEW (POWDERY MILDEW), RUSTS, BLACK SPOT, STEM GALL

Spray with SN -20 solution when symptoms appear. Spray upper and lower surface of leaves and branches with SN -20 solution until thoroughly wet. Spray with SN -20 solution several times, 7 to 10 days apart. USE: 1 tsp. of SN -20 concentrate per gallon of water.

Roses - BROWN CANKER

Use regular spraying. Application should begin in the early Spring as soon as new growth starts and should be made often enough to provide protection throughout the rainy periods and to keep the new growth covered. On the average, an application once a week will be needed from early Spring until plants are dormant. USE: 1 Tsp. of SN -20 concentrate to 1 gallon of water.

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Calendulas, China Asters,
Lilac, Grape Myrtle, Live Oak,
Chrysanthemums, Snapdragons, Dahlias, etc. - POWDERY MILDEW

Spray with SN-20 solution when symptoms appear. Spray upper and lower surface of leaves and branches with SN-20 solution until thoroughly wet. Spray when buds burst in Spring and repeat in 2 weeks later. Spray with SN-20 solution every two weeks during mildew season. Also spray Live Oaks at bud break and again in April. USE: 1 ounce SN-20 concentrate to 4 gallons of water.

Cactus - ROOT ROTS, BACTERIAL LEAF SPOT, TOP ROT

Rotting of underground parts by fungi and bacterial leaf spot or rot of the tops.

Sterilize seeds and disease free cuttings by dipping in SN-20 solution for 5 minutes before planting. Spray at 10-14 day intervals. USE: 1 oz. of SN-20 concentrate to 4 gallons of water

Cactus - SLIMY COLLAR ROT

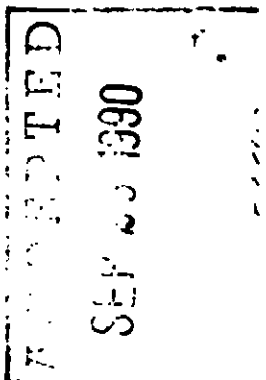
Just before planting, dip entire plant in SN-20 solution. USE: 1 tsp. SN-20 concentrate to 1 gallon water.

Saintpaulias (African Violets) - GRAY MOLD ROT (botrytis)
BUD ROT, MILDEW, ROOT ROTS and CROWN ROTS.

Dip plant and pot in SN-20 solution. Spraying is okay, but complete coverage of all surfaces is important. Spray every 10 days until controlled. USE: 1 Tbsp. of SN-20 concentrate per 4 gallons of water

Aucuba, Dahlia, Pieris, Geranium, Fuchsia,
Peony and Gladiolus - BOTRYTIS, GRAY
MOLD, DOWNY MILDEW

Primarily affects new growth with symptoms of soft decay of flowers, leaves, or stems, followed by a covering of downy gray mold. Control of disease consists of quick removal of dead plant parts and application of SN-20 at the first signs of the disease. For Rust, apply at 7 to 14 day intervals during wet periods starting in early Summer. For Botrytis, spray buds and blooms lightly 2 to 3 times a week using a fine mist. Before shipping, dip spikes in SN-20 solution. USE: 1 Tbsp. of SN-20 concentrate to 1 gallon of water



Ferns, Begonias and Bruneria (corytholoma, isoloma, al-
toplectus, episcia crichospoum)

- LEAF SPOTS, GRAY MOLD BUD ROT, and SHOOT ROT.

All phases of culture. Remove all plant refuse, or dead leaves, garden clean-up is important in control. Spray SN-20 solution before buds open. Then spray when blossoms show pink and again when 3/4 of blossom petals have fallen. Spray again two weeks after petal fall. USE: 1 tsp. of SN-20 per gallon of water.

Fuchsia, Gardenia, Geranium Heliotrope - GRAY MOLD BUD ROT
and STEM ROT

At the first sign of disease, pick off and burn infected leaves and blossoms spray, mist or fog weekly as needed. USE: 1 Tsp. of SN-20 concentrate to 1 gallon of water.

Kalanchoe, Crassula and Sedum - ROOT and CROWN ROT, CROWN
GALL.

Destroy infected plants, or plant parts and drench the remainder with SN-20 solution. Spray plants weekly to assure solution getting around and in base of leaves. USE: 1 Tsp. of SN-20 concentrate to 1 gallon of water.

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Rubber Plant - ANTHRACNOSE on leaves and stems, CROWN GALL
on stems.

At the first sign of disease, pick off and burn infected leaves, spray, mist or fog weekly with SN-20 solution as needed. USE: 1 Tsp. of SN-20 concentrate to 1 gallon of water.

Hawthorn, Hollyhock, Snapdragons - RUSTS

Spraying for protection should begin with the development of new leaves following Winter cleanup, or dormancy. Spraying should begin before the onset of the raining season. Be sure the under sides of infected leaves are covered by SN-20 spray solution.

For Hollyhocks, apply at weekly intervals. Start as soon as growth begins. Repeat applications in late Summer.

For Snapdragons collect and burn the tops in the Fall. Indoors avoid sprinkling the foliage when watering. Apply SN-20 solution at 7-10 day intervals. Start when plants are set in the garden.

USE: 1 Tsp. of SN-20 concentrate per gallon of water.

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Flowering Dogwood (cornus florida) - LEAF SPOTS LEAF BLIGHTS, ANTHRACNOSE

Small circular, dirty yellow spots with reddish purple margins on flowers, leaves and young shoots. Spray 4 times: When flower buds begin to open, as soon as flower bracts have fallen, 4 weeks later, and in late Summer after flower buds are well formed. If possible, spray just before rainy periods. USE: 1 oz. of SN-20 concentrate to 4 gallons of water.

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Hawthorn (crataegus) - LEAF BLIGHTS

After a very wet Spring, small reddish brown spots appear on upper surface of leaves. When spots are numerous, leaves drop. Make 3 spray applications: First as soon as leaves emerge from buds; then when leaves are half grown; and again when fully grown. USE: 1 oz. of SN-20 concentrate to 4 gallons of water.

Snappdragons - PHYLLOSTICTA BLIGHT, ANTHRACNOSE, POWDERY MILDEW, DOWNY MILDEW, STEM ROT RUSTS and WILTS.

Spray with SN-20 solution when symptoms appear. Spray upper and lower sides of leaves until thoroughly wet, every 7 to 10 days. Collect and burn the tops in Fall. USE: 1 tsp SN-20 concentrate per gallon water.

Carnations - LEAF SPOT, CARNATION RUST, GRAY MOLD ROT, STEM ROT, CANKER ROT, CROWN ROT and ROOT ROTS

For RUST, dip cuttings in SN 20 solution before planting. For GRAY MOLD, apply SN-20 solution one to two times just before bud bloom. Apply a light mist spray as the flowers are opening. Carefully collect and burn infected buds, blossoms and stems. USE: 1Tsp. of SN-20 concentrate per gallon of water

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House Plants

To control algae and cross contamination in Terrariums, bubbles, etc. Wipe inside of glass with paper towel dampened with SN-20 solution. Lightly mist plants with SN-20 solution. USE: 1/4 tsp. (scant) per quart of water.